

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000		
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305128A Security and Intelligence Activities					
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	899	6866	0	0	0	0	0	0	8284
H12 Intelligence Support to Force XXI	899	0	0	0	0	0	0	0	1418
H13 Information Dominance Center (IDC)	0	6866	0	0	0	0	0	0	6866

A. Mission Description and Justification: This program element provides funding to develop Proof of Concepts to define fundamental capabilities and limitations of Focused Intelligence XXI technologies which supports Force XXI. Focused Intelligence addresses the functional areas of Situational Awareness, Information Management, and Predictive Analysis. This requires a comprehensive understanding of the following seven critical technologies when integrated into live, virtual or constructive environments. These critical technology areas include: displays (public, cockpit and heads-up), computer hardware capable of high-speed analytical and graphical processing, computer software for distributed tactical or simulation environments (including tools such as Knowledge Based Reasoning and Artificial Intelligence), networks which link tactical and high-speed wide area capabilities [utilizing Asynchronous Transfer Mode (ATM), Synchronous Optical Net (SONET), and multi-level security capabilities] throughout all echelons, sensors for real-time information of the battlefield throughout the electromagnetic spectrum, the Dynamic Visualization Databases for live or synthetic environment (including terrain, features, texture, images, weather, environment, entities and units as a minimum), and the Automatic Target Recognition (ATR) and Assisted Target Recognition (AITR) for timeline reductions. This program element also provides funding for the Information Dominance Center (IDC). The IDC is a beta development and demonstration facility, which uses advanced indigenously developed software and architectures for harvesting, visualizing, displaying, sharing across organizations, analyzing, fusing, and developing courses of action for commanders and decision makers in a real-time environment. The center can address both a tactical or strategic threat across a wide array of transnational and asymmetrical foes.

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	944	0	0
Appropriated Value	950	7000	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-6		
b. SBIR / STTR	-25		
c. Omnibus or Other Above Threshold Reductions		-29	
d. Below Threshold Reprogramming	-16		
e. Rescissions	-4	-105	
Adjustments to Budget Years Since FY 2000/2001 PB			
Current Budget Submit (FY 2001 PB)	899	6866	0

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BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305128A Security and Intelligence Activities				PROJECT H12																	
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost																
H12 Intelligence Support to Force XXI	899	0	0	0	0	0	0	0	1418																
<p>A. Mission Description and Justification: This project provides funding to develop Proof of Concepts to define fundamental capabilities and limitations of Focused Intelligence XXI technologies which supports Force XXI. Focused Intelligence addresses the functional areas of Situational Awareness, Information Management, and Predictive Analysis. This requires a comprehensive understanding of the following seven critical technologies when integrated into live, virtual or constructive environments. These critical technology areas include: displays (public, cockpit and heads-up), computer hardware capable of high-speed analytical and graphical processing, computer software for distributed tactical or simulation environments (including tools such as Knowledge Based Reasoning and Artificial Intelligence), networks which link tactical and high-speed wide area capabilities [utilizing Asynchronous Transfer Mode (ATM), Synchronous Optical Net (SONET), and multi-level security capabilities] throughout all echelons, sensors for real-time information of the battlefield throughout the electromagnetic spectrum, the Dynamic Visualization Databases for live or synthetic environment (including terrain, features, texture, images, weather, environment, entities and units as a minimum) , and the Automatic Target Recognition (ATR) and Assisted Target Recognition (AITR) for timeline reductions</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 899 Transition technology horizontally to Corps/Divisions continuing Proofs of Concept test with quarterly integration tests <p>Total 899</p> <p>FY 2000 Planned Program: Project not funded in FY 2000.</p> <p>FY 2001 Planned Program: Project not funded in FY 2001.</p> <p>B. Other Program Funding Summary: None</p> <p>C. Acquisition Strategy: Utilize existing INSCOM and the Defense Advanced Research Project Agency contracts to obtain hardware and software integration support. Major integrated Proofs of Concepts, with U.S. Forces Korea and the 18th Airborne Corps (101st Airborne Division and 525th Military Intelligence Brigade) as the user, will occur on a quarterly basis.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">D. Schedule Profile</th> <th style="text-align: center;">FY1999</th> <th style="text-align: center;">FY2000</th> <th style="text-align: center;">FY2001</th> <th style="text-align: center;">FY 2002</th> <th style="text-align: center;">FY 2003</th> <th style="text-align: center;">FY 2004</th> <th style="text-align: center;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Proofs of Concept</td> <td style="text-align: center;">1-4 Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										D. Schedule Profile	FY1999	FY2000	FY2001	FY 2002	FY 2003	FY 2004	FY 2005	Proofs of Concept	1-4 Q						
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Proofs of Concept	1-4 Q																								
<div style="display: flex; justify-content: space-between; padding: 10px;"> Project H12 Page 2 of 5 Pages Exhibit R-2A (PE 0305128A) </div>																									

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BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305128A Security and Intelligence Activities				PROJECT H13	
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
H13 Information Dominance Center (IDC)	0	6866	0	0	0	0	0	0	6866

A. Mission Description and Justification This PE is used to develop a prototype for intelligence analysis and counter-intelligence operations supporting information operation missions. Denying, disrupting, and suppressing the adversary's information flow and his ability to effectively command and control his operations is the Army's goal of waging information age warfare. The IDC is a beta development and demonstration facility, which uses advanced indigenously developed software and architectures for harvesting, visualizing, displaying, sharing across organizations, analyzing, fusing, and developing courses of action for commanders and decision makers in a real-time environment. The center can address both a tactical or strategic threat across a wide array of transnational and asymmetrical foes.

The IDC will play a critical role in Army's development of a full spectrum information operations capability that spans both the offensive and protect arenas. Key to waging an information war against and enemy will be gaining and maintaining full spectrum battlefield visualization, comprehension of enemy and friendly centers of gravity, knowledge of battlefield deception, PSYOP, public affairs, civil affairs, electronic warfare, OPSEC, and understanding of impact upon destruction or disruption of critical nodes (regional and local). The IDC will support Force Protection/anti-terrorism operations by providing predictive analysis and indications and warnings of attacks on our soldiers or infrastructure. The IDC also will be employed in support of peacekeeping and humanitarian aid missions. The IDC will demonstrate and test methodologies and Science and Technology tools that can provide operational plans to fight asymmetric and asynchronous warfare against transnational and non-aligned threats. This new capability would provide the unique collaborative environment to rapidly acquire diverse information, dynamically achieve situational awareness through advanced fusion and visualization techniques, and provide tailored courses of action to warfighters and DA decision-makers.

The IDC will correlate data from local and international media as well as operational and intelligence sources. The center will perform evaluation and prototyping of how threat mapping of political, military, economic, and social fabrics will aid in force protection/facilities protection for U.S. forces on the ground now or that might be sent in later. The IDC will be the prototype for fused battlefield visualization picture of the affects of air war at one location on a big screen display—collateral damage; infrastructure damage; location of paramilitary and military forces (Freedom fighters and Serbs); and dislocation of refugees and resultant humanitarian aid issues. The IDC will demonstrate a fused battlefield visualization picture of foreign and U.S. centers of gravity in support of contingency operations such as \Kosovo and SFOR Operations to help support diplomatic initiatives. It will prototype a fused, object oriented, GIS-oriented, visualization picture of the major political and economic players at international, national, regional, local levels in Serbia and surrounding regions. In addition, the IDC will leverage an ability to analyze a tactical view of the conflict enabling Army to conduct offensive information operations (PSYOP, computer attack, deception and denial, media influence, cover operations) that could be used to compliment the air strikes.

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DATE
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7 - Operational System DevelopmentPE NUMBER AND TITLE
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H13**FY 1999 Accomplishments:** Project not funded in FY 1999**FY 2000 Planned Program:**

- 2687 Core IDC Software/Hardware Integration Contractor Support: This is the key team for integration and prototyping of leading edge technologies into the IDC. In addition, this team prior to integration will perform continuous prototyping of novel solutions. They are fundamentally responsible for overall architectural control and evolution of the composable architecture, which is the foundation for LIWA's operational uniqueness.
 - 3995 TUAUV Source Selection/System Capabilities Demo Data Storage and Support: This money enables a state of the art 200 Terabyte storage, retrieval, backup and querying capability for a distributed architecture. The IDC is based on a database centric paradigm enabling state of the art business enterprise applications to be incorporated.
 - 184 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)
- Total 6866

FY 2001 Planned Program: Project not funded in RDTE in FY 2001. Continued development and sustainment will take place using OMA funding-Program BA411128.**B. Other Program Funding Summary:** Not applicable

C. Acquisition Strategy: The Army strategy is to add emerging command and control information technology to existing information and decision support architectures. Systems will largely off-the-shelf procurements. A Time and materials contracts, awarded to Sterling Software, are used for software and hardware integration. A time and materials contract awarded to SYTEX, Inc. is used for development of intelligence modeling support.

D. <u>Schedule Profile</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Award of Delivery Order under existing IDIQ	1Q-4Q					
Time and Materials contracts						
Completion of initial design	1Q-4Q					
Facility Modification Work Begins	1Q-4Q					
Basic Facility Modifications Complete	1Q-4Q					
Initial Capabilities Demonstration	1Q-4Q					
In-Progress Review	1Q-4Q					
First Operational Test of Base Level Analytical systems	1Q-4Q					
Develop Establish Data warehousing/Data mining capability	1Q-4Q					
Develop Establish Connectivity/Collaboration Capability	1Q-4Q					

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D. Schedule Profile	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	
Develop Information Visualization Capability	1Q-4Q						
C2 Development/Improvements	1Q-4Q						

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